ORG: none

TITLE: Instrument for measuring static characteristics of thin magnetic films

SOURCE: Izmeritel'naya tekhnika, no. 3, 1966, 58-61

TOPIC TAGS: magnetic thin film, magnetic thin film measurement

ABSTRACT: Several oscilloscope-type instruments for studying the hysteresis loop of magnetic thin films have been proposed recently (E. C. Crittenden et al., Rev. Sc. Instr., 1951, v. 22, no. 12; K. E. Drangeid, Z. angew. Math. u. Physik, 1959, no. 1; H.I. Ouncy, Rev. Sc. Instr., 1960, v. 31, no. 7). The present article claims a development of an improved instrument based on the above works and consisting of a sensor (magnetizing and measuring coils), an amplifier with an integrator, an oscilloscope, and a 50-cps power source. A principal circuit diagram is explained, and technical data of major components is given. A two-stage electron-tube amplifier, an electron-tube integrator, a noise-compensating coil, and a signal phase-control circuit are the features that ensure improved operation of the instrument. The coercive force and saturation induction are measured directly from the hysteresis loop appearing on the oscilloscope screen; other static characteristics are determined from a photograph of the loop. Orig. art. has: 3 figures and 9 formulas. [03]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 004 / ATD PRESS: 4258

Card 1/1 UDC: 621.317.42:539.238

ZELINSKIY, Z., inzh.

Large-span trusses made of prestressed concrete for roofs of industrial buildings in the Polish People's Republic. Bet. i zhel.-bet. no.9:426-430 S '61. (MIRA 14:10)
(Poland--Precast concrete trusses)

PROCHAZKA, Josef; GABRIEL, Zdenek, inz.; PAZNOCH, Jar., inz.; BERANEK, Vitezslav; ZELINSKY, Jan

How we are prepared for the winter operation. Letecky obzor 8 no.11:321-323 N '64.

1. Technical manager of the Czechoslovak Airlines (for Prochazka). 2. Deputy Manager of the SLS (for Gabriel and Paznocht). 3. Manager of the Prague Airport (for Beranek). 4. Manager of the Bratislava Airport (Zelinsky).

GRIGELYTE, M.; SEIBUTIS, A.; ZELIONAK, L.

Some agricultural chemical indexes of Lithuanian peat. Liet ak darbai B no.1:181-201 '60. (EEAI 9:10)

1. Lietuvos TSR Mokslu Akademijos Geologijos ir geografijos institutas.
(Lithuania--Peat)

ZELIONKA, L. P., Candidate Agric Sci (diss) -- "Excessively moist earth of the Lithuanian SSR, its area, types, and classification". Kaunas, 1959. 31 pp (Min Agric USSR, Lithuanian Agric Acad), 130 copies (KL, No 23, 1959, 169)

ZELIONKAYTE, V.

"Investigations on Selonothionates." Cand Chem Sci, Inst of Chemistry and Chemical Technology, Acad Sci Lithuanian SSR, Vil'nyus, 1955. (KL, No 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

YANITSKIY, I.V. [Janickis, J.]; ZELIONKAYTE, V.I. [Zelionkaite, V.]

Decomposition of diselenotetrathionates. Liet ak darbai B no.4: 79-89 '59 (EEZI 9:3)

1. Kaunasskiy politekhnicheskiy institut.
(Diselenotetrathionates)

ZELIONKAYTE, V.I. [Zelionkaite, V.]; YANITSKIY, I.V. [Janickis, J.]

Application of polarography in analyzing selenium compounds. Liet ak darbai B no.4:71-77 '59. (EEAI 9:3)

1. Kaunasskiy politekhnicheskiy institut.
(Selenium) (Polarograph and polarography)

AUTHORS: Yanitskiy, I. V., Zelionkayte, V. I. SOV/78-3-8-7/48

TITLE: On the Interaction Between Selenious and Sulfurous Acid (O vzaimodeystvii selenistoy kisloty s sernistoy kislotoy)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1755-1760 (USSR)

ABSTRACT: The quantitative course of the interaction between selenious and sulfurous acid was investigated and an analytic method for the examination of the resulting products was developed. It is seen from the results that the reaction between selenious and sulfurous acid takes place at a ratio of the initial products $H_2SeO_3 : H_2SO_3 = 2 : 5$ and passes almost perfectly in the presence of an excess of sulfurous acid according to the following equation:

$$2\ H_2SeO_3 + 5\ H_2SO_3 \longrightarrow 3\ H_2SO_4 + H_2Se_2S_2O_6 + 3\ H_2O \qquad (3)$$

Di-selenotetrathionic acid was first isolated by means of nitron. A simple and more suitable synthesis of the potassiumsalt ($K_2Se_2S_2O_6 \cdot H_2O$) of the di-selenotetrathionic acid was described. The reducing mechanism of selenious acid with sulfurous acid

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On the Interaction Between Selenious and Sulfurous Acid

was discussed. The final products are always elementary selenium and sulfuric acid. It was further observed that the selenotetrathionic acid is decomposed in highly acid solutions and by heating according to the equation:

$$H_2Se_2S_2O_6 + H_2O \longrightarrow H_2SO_4 + H_2SO_3 + 2\,Se$$

There are 4 tables and 13 references, 6 of which are Soviet.

ASSOCIATION: Kaunasskiy politekhnicheskiy institut (Polytechnical Institute of Kaunas)

SUBMITTED: April 22, 1957

ZELIONKAYTE, V.I. [Zelionkaite, V.]; YANITSKIY, I.V. [Janickis, J.]; KUDARAUSKIENE, D.F. [Kudarauskiene, D.]

Formation of higher selenopolythionic acids under the interaction of selenotrithionate with selenic acid. Trudy AN Lit. SSR. Ser. B. no.1:103-116 '64 (MIRA 17:7)

Some reactions of higher selenopolythionates. Selenopolythionates of dichlorodiethylenediaminecobalst. Ibid. 117-126

1. Kaunasskiy politekhnicheskiy institut i AN Litovskoy SSR.

ZELIONKAYTE, V.I.

YANITSKIY, I.V.; ZELIONKAYTE, V.I.

Interaction between selenium sulfate and selenious acid. Zhur.neorg. khim. 2 no.6:1349-1355 Je '57. (MIRA 10:10)

1.Kaunasskiy politekhnicheskiy institut.
(Selenium compounds)

YANITSKIY, I.V.; ZELIONKAYTE, V.I.

Reactions of selenious acid with sulfuric acid. Zhur. neorg. khim. 3 no.8:1755-1760 Ag '58. (MIRA 11:9)

1. Kaunasskiy politekhnicheskiy institut.
(Selenious acid) (Sulfuric acid)

ZELISLAWSKI, Jerzy

The autumn quality contest of Polish-made machinery and equipment. Przegl techn no.41:5 12 O '60.

ZELIZNIY, A.M. [Zelizmyi, A.M.]; ZELIZNA, S.T.

Various methods for the production of ethylene. Khim. prom. [Ukr.] no.1:37-41 '63 (MIRA 17:7)

1. L'vovskiy politekhnicheskiy institut.

MONCHAK, L.S.; ZELIZNA, S.T.

Certain regularities in the change of the physicochemical properties of the oils of the Dolina field. Nefteprom. delo no.8:8-11 '64. (MIRA 17:12)

1. L'vovskiy politekhnicheskiy institut.

MONCHAK, L.S.; ZELIZNA, S.T.

Characteristics of formation waters in the Dolina oil field.
Neftegaz. geol. i geofiz. no.3:47-50 '65. (MIRA 18:7)

1. L'vovskiy politekhnicheskiy institut.

ZELIZNIY, A.M. [Zeliznyi, A.M.]; ZELIZNA, S.T.

Various methods for the production of ethylene. Khim. prom. [Ukr.] no.1:37-41 '63 (MIRA 17:7)

1. L'vovskiy politekhnicheskiy institut.

ZELIZNYY, A.M.; ROMANYUK, I.M.; SHEVCHUK, V.U.

Increasing the productivity of a single flow reactor of oxidative pyrolysis of methane. Khim. prom. 40 no.12:891-894 D '64.
(MIRA 18:2)

ZELIZNYY, A.M.; PROKOPETS, M.M.; CHERNYAVSKAYA, A.P.

Role of paraffin hydrocarbons as antisolvents in the reaction of alkyl benzenes with dimethylformamide. Izv. vys.ucheb.zav.:neft' i gaz 7 no. 1:47-51 '64. (MIRA 17:7)

1. L'vovskiy politekhnicheskiy institut.

ZELIZNIY, A.M. [Zeliznyi, A.M.]

Size of the reaction zone during the autothermal conversion of methane to acetylene. Dokl. LPI 5 no. 1/2:65-71 '63. (MIRA 17:6)

ZELIZNIY, A.M.[Zeliznyi, A.M.]; STROM, L.D.

Thermal decomposition of diluted acetylene. Dokl. LPI 5 no. 1/2: 72-77 '63. (MIRA 17:6)

PROKOPETS, M.M.; ZELIZNYY, A.M.; POLATAYKO, R.I.

Extraction of aromatic hydrocarbons from a kerosine fraction of Dolina petroleum using dimethylformamide. Izv. vys. ucheb. zav.; neft' i gaz. 8 no.5:63-66 '65. (MIRA 18:7)

1. L'vovskiy politekhnicheskiy institut.

ROMANYUK, I.M.; ZELIZNYY, A.M.

Simultaneous production of acetylene and ethylene with the pyrolysis of hydrocarbon raw materials. Khim. prom. 41 no.2: 13-16 F '65. (MIRA 18:4)

ZELIZNIY, A.M. [Zeliznyi, A.M.]

Critical rates of a break-away flame of methane-oxygen mixtures.
Dokl. LPI 5 no. 1/2:74-83 '63. (MIRA 17:6)

PROKOPETS, M.M.; ZELIZNYY, A.M.

Studying the properties of dimethylformamide as a selective solvent of aromatic hydrocarbons. Izv. vys. ucheb. zav.; neft' i gaz 5 no.7:51-56 '62. (MIRA 16:7)

1. L'vovskiy politekhnicheskiy institut.
(Hydrocarbons) (Formamide)

66980
SOV/81-59-13-45165

5.3200

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 13, p 63 (USSR)

AUTHORS: Shevchuk, V.U., Strom, D.A., Zeliznyy, A.M.

TITLE: The Problem of the Role of a Solid Surface at the Oxidation Pyrolysis of Methane

PERIODICAL: Nauchn. zap. L'vovsk. politekhn. in-ta, 1958, Nr 50, pp 143 - 151

ABSTRACT: The dependence of the rate of oxidation pyrolysis of CH_4 in a mixture of 60% Dashava gas and 40% O_2 on the gas flow speed, the temperature, the partial hydrogen pressure and the wall surface value S has been investigated in a quartz pipe at 1,200 - 1,500°C and a pressure of 1 atm. It has been found that at 1,200 - 1,400°C the decomposition of CH_4 to C_2H_2 in the oxidation pyrolysis of CH_4 proceeds with the participation of a solid surface. The quote of this participation drops with an increase in the temperature. At 1,400°C the reaction proceeds completely in the homogeneous phase. O_2 introduced together with CH_4 forms CO_2, CO and H_2O, in which case the composition of the reaction products depends solely on the temperature, but not on S. Additions of H_2 decrease the rate of the oxidation pyrolysis of CH_4 at 1,200°C by 20%;

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The Problem of the Role of a Solid Surface at the Oxidation Pyrolysis of Methane

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SOV/81-59-13-45165

the first portions of H_2 adsorbed on the walls of the vessel act more vigorously than the following ones. The authors come to the conclusion of the double role of S: at small S the homogeneous decomposition of CH_4 prevails, an excessively developed S suppresses it. At the optimum value of S the rate of C_2H_2 formation can be increased and the temperature of the process decreased.

V. Vasserberg

ard 2/2

BALYTA, V.I.; ZELIZNYY, A.M.; ROMANYUK, I.M.; SHEVCHUK, V.U.

Layout of equipment for the production of acetylene by the oxidation pyrolysis of methane. Gaz.prom. 4 no.9:36-41 S '59 (MIRA 12:11)

(Acetylene) (Methane)

S/152/62/000/007/001/002
B126/B144

AUTHORS: Prokopets, M. M., Zeliznyy, A. M.

TITLE: Investigation of the properties of dimethyl formamide as selective solvent of aromatic hydrocarbons

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 7, 1962, 51-56

TEXT: The purpose of the investigation was to ascertain whether dimethyl formamide could be put to practical use in extracting aromatic hydrocarbons from gasoline-kerosine fractions. The tests were made with benzene, toluene, the three xylenes, ethyl benzene, mesitylene, and pseudocumene. The aromatics were dissolved in n-paraffins which had the same number of carbon atoms respectively, from C_6 to C_9. The extraction tests showed that the solubility of n-paraffins and aromatics in dimethyl formamide decreases as their molecular weight increases. The selectivity of dimethyl formamide increases with the higher molecular weight of aromatic hydrocarbons and remains insignificant in respect of isomers. The

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extraction in one stage of aromatic hydrocarbons from kerosine 210-305°C using dimethyl formamide at the ratio kerosine : dimethyl formamide 1 : 0.5 yielded 8% by volume of aromatic hydrocarbons of a purity of 99.8%. The alkyl aryl sulfonates of sodium obtained from the sulfonic acids of kerosine treated with dimethyl formamide had better properties than those produced from kerosine treated with sulfuric acid. In view of its efficient selectivity dimethyl formamide can be used to obtain raw material for the production of surface-active agents. There are 4 figures and 3 tables.

ASSOCIATION: L'vovskiy politekhnicheskiy institut (L'vov Polytechnic Institute)

SUBMITTED: February 27, 1962

AM4033661 BOOK EXPLOITATION S/0789

Grinenko, Boris Stepanovich; Zelizny*y, Andrey Mikhaylovich

Production of acetylene from natural gas (Proizvodstvo atsetilena iz prirodnogo gaza) Kiev, Gostekhizdat USSR, 1963. 176 p. illus., biblio. 900 copies printed. Managing editor: Raytburd, L. L. (Engineer); Editor of the publishing house: Zelenyuk, Ye. Ye. (Engineer); Technical editor: Berezovy*y, V. N.; Proofreader: Yefimenko, N. P.

TOPIC TAGS: acetylene production, natural gas, hydrocarbon pyrolysis, industrial acetylene purification, thermal pyrolysis, electropyrolysis, acetylene concentration

PURPOSE AND COVERAGE: This book is intended for engineers and technicians in the chemical and petroleum-chemical industries and for personnel at scientific-research and design institutes, and may be utilized also by students in the corresponding specialties at vuzes. Numerous literature data on the production of acetylene from natural gas and other hydrocarbon raw materials are generalized. The physical-chemistry and energy bases of the pyrolysis of hydrocarbons to ace-

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AM4033661

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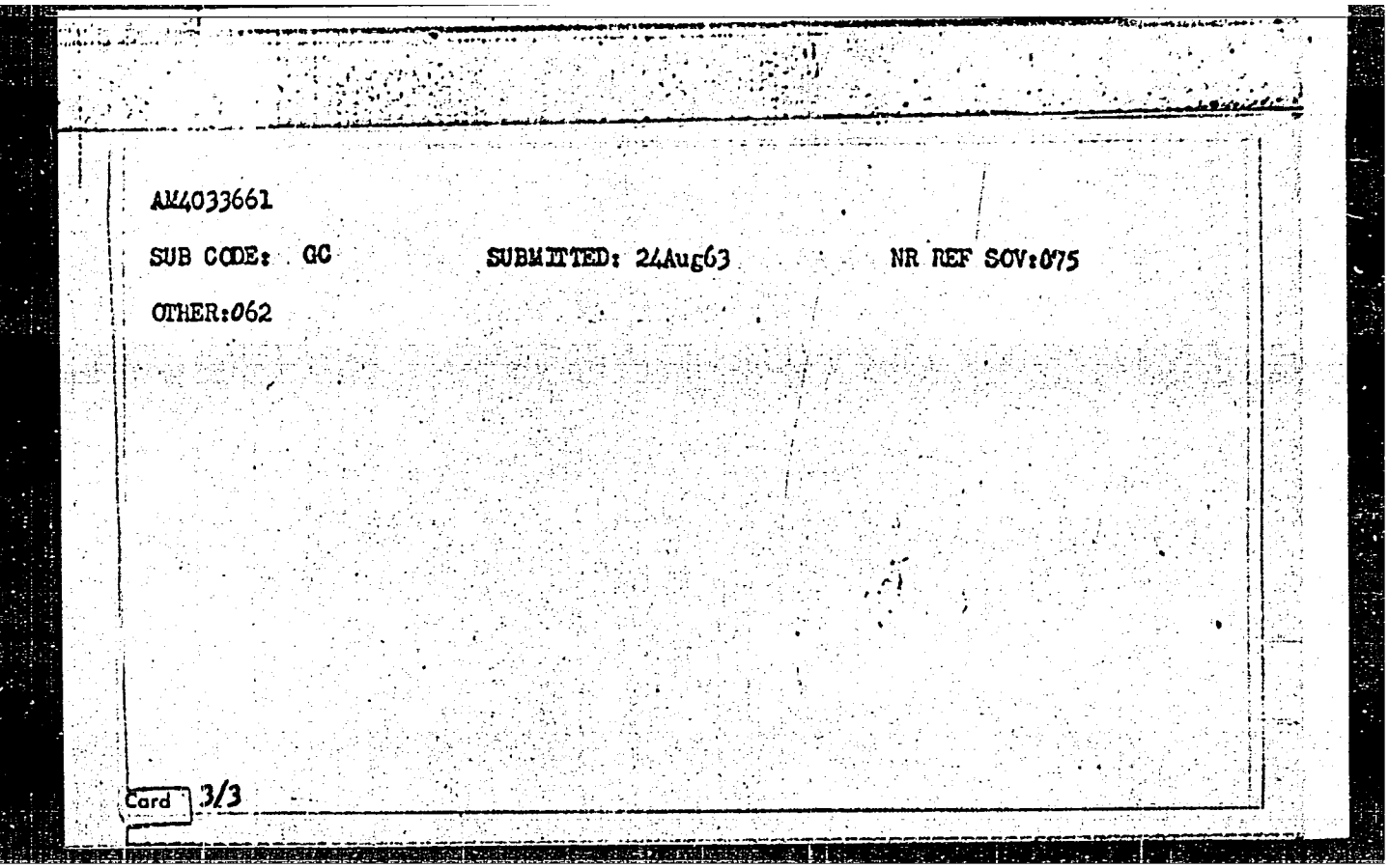

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SUB CODE: GC SUBMITTED: 24Aug63 NR REF SOV:075

OTHER:062

Card 3/3

ZELIZNYY, A.M.; PROKOPETS, M.M.; CHERNYAVSKAYA, A.P.

Role of paraffin hydrocarbons as anti-solvents in the reaction of alkyl benzenes with dimethyl formamide in the extraction process. Izv. vys. ucheb. zav.; neft' i gaz 7 no.8:57-61 '64. (MIRA 17:10)

1. L'vovskiy politekhnicheskiy institut.

ROMANYUK, I.M.; ZELIZNYY, A.M.; SHEVCHUK, V.U.

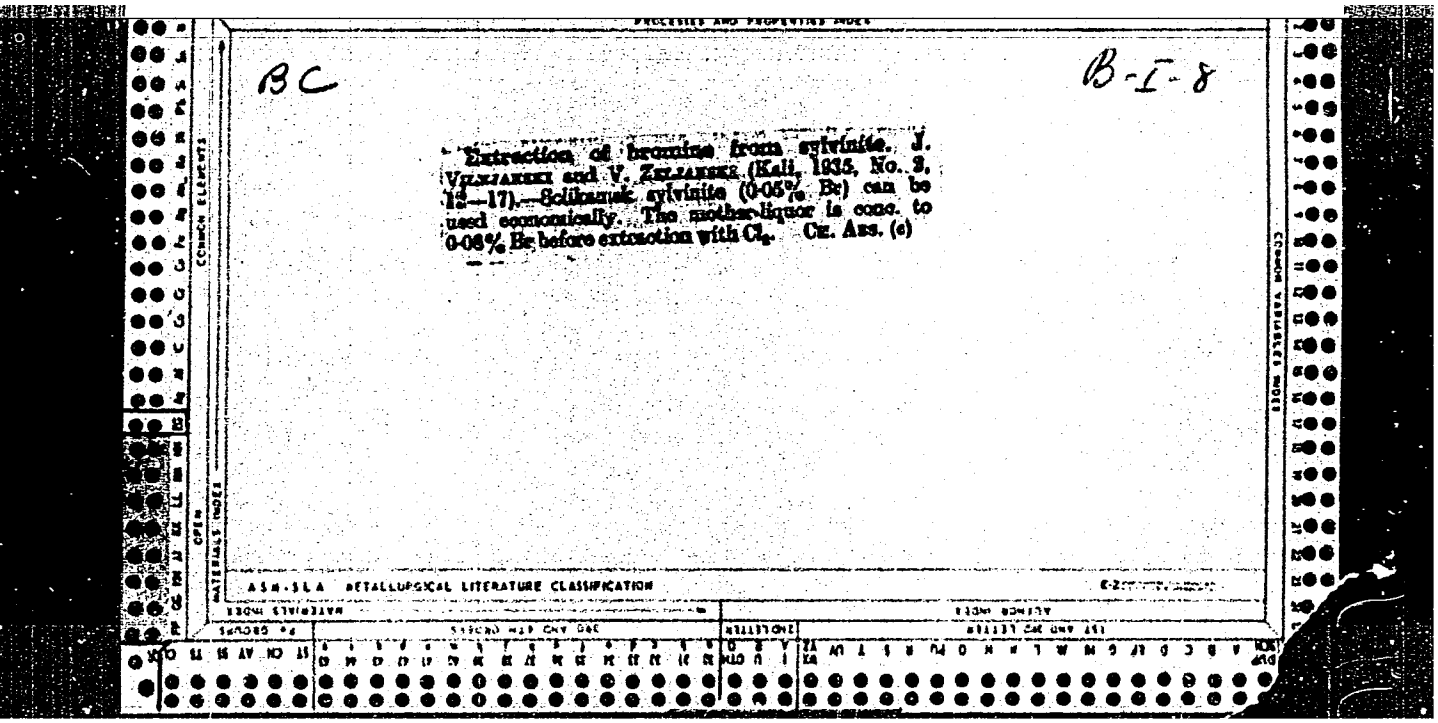
Investigating incomplete burning in a twisted gas flow in a tunnel acetylene reactor. Gaz. prom. 9 no.10:34-40 '64.
(MIRA 17:12)

GRINENKO, Boris Stepanovich; ZELIZNYY, Andrey Mikhaylovich; ZELENYUK, Ye.Ye., inzh., red.izd-va; BEREZOVYY, V.N., tekhn. red.

[Acetylene production from natural gas] Proizvodstvo atsetilena iz prirodnogo gaza. Kiev, Gostekhizdat USSR, 1963. 176 p. (MIRA 17:2)

ROMANYUK, I.M.; SHEVCHUK, V.U.; ZELIZNYY, A.M.

Effect of the width of ignition on the process of thermooxidative pyrolysis of methane. Gaz. prom. 10 no.9:40-45 '65.
(MIRA 18:11)



BC

B-I-8

Extraction of bromine from sylvinite. J. VELIKANOVI and V. ZELIKMANI (Kali, 1935, No. 2, 12—17).—Soliknamsk sylvinite (0·05% Br) can be used economically. The mother-liquor is conc. to 0·08% Br before extraction with Cl_2. Cr. Abs. (c)

ZELJANSKAJA, A. I.

"Sur les cristallohydrates du fluorure d'aluminium." W. S. Jatlow et A. I. Zeljanskaja. (p. 1787)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii). 1937, Volume 7, No. 12.

ZELJAZOVA-PASPALEVA, A. [Zheliazova-Paspaleva, A.]

Consinmum butei n. sp. (Dicrocoeliidae), a new species of Trematoda, found in the gall bladder of Buteo buteo L. Doklady BAN 15 no.2:203-205 '62.

1. Helminthologisches Zentrallaboratorium an der Bulgarischen Akademie der Wissenschaften, Sofia. Vorgelegt von korresp. Mitglied K. Matov.

ZELJEZNOV, M.

"Applied television technics" by G.Schaaf. Reviewed by M.Zeljeznov. Elektr vest 29 no.8/10:230 '61.

ZELKIN, I.I., red.; KASHIRIN, A.G., tekhn.red.

[Electric cables, wires, and cords] Kabeli, provoda i shnury elektricheskie. Izd.ofitsial'noe. Moskva, Gos.izd-vo standartov, 1960. 547 p. (MIRA 14:2)

1. Russia (1923- U.S.S.R.) Vsesoyuznyy komitet standartov. (Electric cables--Standards) (Electric wire--Standards)

ZELJKO, M.

Simultaneous complement fixation test for dourine and glanders

Vet Arh 19:243-246 -1949

ZELJKO, Dr. Marko

"Salt Vaccine against Newcastle Disease Prepared from Mukteswar Strain." Dr. Marko Zeljko & Dr. Ivan Zarnic, - Vets. & scientific collaborators of the Inst. for Vet. & Medical Researches, Zagreb.

SOURCE: Vet., BROJ 8-9-10, p. 788, 1952

YUGOSLAVIA / Virology. Human and Animal Viruses. E-3

Abs Jour: Ref Zhur-Biol., No 10, 1958, 43066.

Author : Zeljko, M., Forsek, Z.
Inst : Not given.
Title : Experimental and Practical Checking of a Modified Hog Cholera Virus Obtained from Hogs.

Orig Pub: Veterin. arh., 1956, 26, No 9-10, 237-253.

Abstract: A modified virus (M-virus) was obtained from lapinized (?) hog cholera virus additionally passed once through piglets of 25-30 kg. As vaccine we used defibrinated blood of a hog variety (weight 25-30 kg) sensitive to virus, taken on the 6-7 day after infection at a temperature not lower than 39.5°, or lyophilized material composed of a 10% spleen suspension in undiluted defibrinated blood. In the defibrinated blood at a temperature from -2° to -4° the virus was preserved for a period of 4-5

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YUGOSLAVIA / Virology. Human and Animal Viruses. E-3

Abs Jour: Ref Zhur-Biol., No 10, 1958, 43066.

Abstract: months, at room temperature for 18 days; in lyophilized material at -4° for a period of 8 months. The virus was administered together with 5-10 ml of serum depending on the weight and condition of the animal. When 10 ml of hyperimmune serume was administered, no post-vaccination reactions were observed. Data are given of virus titration on hogs, in solutions of 1:50, 1:100, and 1:150 given either with or without the serum. The pathogenic potential of M-virus was low. In the district of Voyvodin, when 1,062,099 hogs were vaccinated, during a 3-week period after vaccination reactions were observed in 0.16%; 0.05% of the animals died. Immunity failure was noted in very young animals or when improper vaccine was used.

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R-3

YUGOSLAVIA/Diseases of Farm Animals - Diseases Caused by Viruses and Rickettsiae.

Abs Jour : Ref Zhur - Biol., No 14, 1958, 64669

Author : Forsek, Z., Zeljko, M., Kurtanjek, I.
Inst : -
Title : Immunization of Chickens Against the Newcastle Disease by Means of the Addition of the Virus of the Newcastle Disease to Drinking Water with a Stabilizer.

Orig Pub : Veterinaria (Jugosl.), 1957, 6, No 1, 4-12.

Abstract : The best vaccine for the immunization of chickens according to this method was found to be the glycerinated virus of the Muktesvar strain, and the best stabilizer, powdered milk. The amount of virus necessary for immunization was about 15 thous. units DL_{50} per 1 ml. The titer of the retardation of agglutination in the vaccinated chickens averaged about 1:250 and the number of chickens that had not acquired immunity did not exceed 4%. Bacterial

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YUGOSLAVIA/Diseases of Farm Animals - Diseases Caused by Viruses and Rickettsiae. R-3

Abs Jour : Ref Zhur - Biol., No 14, 1958, 64669

contamination of the drinking water reduces the preservability of the virus, and it is therefore necessary to use a sterile stabilizer and purer water if possible.

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YUGOSLAVIA

ZELJKO, M. and PAUKOVIC, C.; Veterinary Institute (Veterinarski Institut) Zagreb.

"Experimental Vaccination Against Infectious Bronchitis."

Belgrade, Veterinarski Glasnik, Vol 20, No 7, 1966; pp 545-547.

Abstract [English summary modified]: Vaccination of 28M chickens on 2 poultry farms with a live egg-passaged strain of avian infectious bronchitis virus showed that good protective effect was obtained; also on virus of atypical fowl cholera if infection was simultaneous. Three Yugoslav, 12 Western references; manuscript received 11 May 66.

1/1

ZELJKO, M.

(1)

SURNAME (in caps); Given Names

Country: Yugoslavia

Academic Degrees: [not given]

Affiliation: [not given]

Source: Belgrade, Veterinarski glasnik, No 6, 1961, pp 517-520.

Data: "Forensic Evaluation of Virus Pneumonia in Pigs."

Authors:

[illegible], M.

[illegible]

YUGOSLAVIA

ZELJKOVIC, S. [affiliation not given].

"A Consultation over the Transmission of Anthrax to Human Beings Via the Meat of an Ox Slaughtered on an Emergency Basis."

Belgrade, Veterinarski Glasnik, Vol 17, No 7, 1963, pp 633-636.

Abstract: The author describes a case dating from 1955 in which a cow in a village in the vicinity of Prnjavor perished from anthrax, the authorities proclaimed the necessity of vaccinating all cattle in the area against anthrax, a certain neighboring farmer did not have his cattle innoculated, one of his oxen fell sick and was slaughtered, the farmer sold the meat in the neighborhood without benefit of veterinary examination, and three women fell ill with anthrax (one died). The infection evidently reached the women through the skin as a result of their handling of the meat. Those who ate the meat were not affected.

No references.

1/1

ZELJOVIC, S.

(33)

Belgrade, Veterinarski Glasnik, Vol 15, No 12, 1961 (cont'd)

11. "Lesions and Accidents of Staff in Artificial Insemination Centers" R. SIC; pp 1027-1031.

12. "Supplies of Drinking Milk in Bosnia and Hercegovina" S. ZELJKOVIC; pp 1033-1036.

13. "Diabetes Insipidus in a Bitch" B. REBESKO, Clinical Center of the Veterinary Department of FAGVB (Abbr. not identified) Ljubljana; pp 1037-1039.

14. "Bovine Psoroptosis" K. PETROVIC and M. SEVER, Vet. Institute People's Republic of Serbia, Belgrade; pp 1041-1042.

15. "Localisation of Pathologic Changes in Amidostomosis" V. VISACKI; Veterinary Station Mramorak; pp 1043-1044.

16. "Veterinary Station Prelog in the Cakovec Kotor - An Initiator and Participant in the Current Animal Breeding Program" I. MIJATOVIC; pp 1045-1048.

1-Institut za primenu nuklearne energije u poljoprivredi, veterinarstvu i sumarstvu. 2-Veterinarski zavod. 3-Institut i Klinika za zarazne bolesti Veterinarskog fakulteta. 4-Veterinarska dijagnosticka stanica. 5-Institut za invazione bolesti. 6-Veterinarski centar. 7-Veterinarski institut NRS. 8-Veterinarska stanica.

USSR/Soil Science - Mineral Fertilizers.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67937

Author : Zel'ke, V.
Inst : -
Title : Rational Utilization of Mineral Fertilizers in the GDR

Orig Pub : Mezhdunar. s. kh. zh., 1957, No 2, 43-61.

Abstract : The most important condition for increasing the effectiveness of mineral fertilizers on the soils of the GDR is liming, using both natural lime resources and lime wastes (leima-lime and buna-lime, blast-furnace lime). The effectiveness of phosphorous fertilizers in the GDR is improved in the first place by using them on the soils which need them most, by using granular P, by applying it in ribbons, to the rows, and in layers, and also by using thermophosphates (Mg-phosphate, alkaline floated phosphate, potassium phosphate from distillers' waste). Thermophosphates are good fertilizers since they contain Mg, a substance in

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USSR/Soil Science - Mineral Fertilizers. J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67937

which the GDR soils are deficient. Phosphorous and potassium fertilizers are applied in autumn except on light soils where it is better to apply K in the spring. As concerns the nitrogen fertilizer dosages presently taken as standard in the GDR, repeated application of small doses of nitrogen is not superior to applying all the fertilizer at once early in the season. Thus, for example, two applications of N increased protein content but reduced the grain yield as compared with a field where it was applied all at once. In recent years in the GDR it has been proposed to increase the production of complex fertilizers (am-sup-ka and nitrofosk). -- O.P. Medvedeva

Card 2/2

ZHILKIN,--

--,ASTAFEVA, ZhOKh, 1933, 3, 839-842

ZELKIN, --
-- ASTAPENYA, ZhOKh 3, 839-42, 1933

ZELKIN, E.G. [Zelkin, Ye.G.]

Foresight in biology and technics. Natura Biologie 14 no.2: 37-44 Mr-Ap '62.

ZEL'KIN, E.G.

Foresight in biology and technique. P:iroda 50 no.9:48-53 S '61. (MIRA 14:8)
(Cybernetics)

28(1)

AUTHOR: Zel'kin, Eduard Germanovich, Aspirant at the Chair of Heat Control and Automation of the Moscow Power Engineering Institute

SOV/161-58-2-12/30

TITLE: Optimum Filter Regulator With Given Impulse Transient Function (Optimal'nyy fil'tr-regulyator s zadannoy impul'snoy perekhodnoy funktsiyey)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Elektromekhanika i avtomatika, 1958, Nr 2, pp 94 - 105 (USSR)

ABSTRACT: A method for the construction of a regulator with given impulse transient function is described. The regulator is built as a computer serving for the calculation of integrals of the following type:

$$\int_0^1 f(t-\tau)\, F(\tau)\, d\tau$$

The regulator causes an approximation of the input signal within the finite time-period T by a polynomial of the power m and smoothes it by the least square method. At the same time, the regulator allows to obtain both the signal itself and its

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Optimum Filter Regulator With Given Impulse Transient Function SOV/161-58-2-12/30

conversion. The calculation of the approximation factors is set forth. As an example, the calculation of a regulator for obtaining the derivative of a slowly varying signal is given. The scheme and the calculation of the model of a regulator on a rotating potentiometer and the results of experimental testing of the model are given. The work shows that it is possible to build an optimum filter regulator with given impulse transient function by relatively simple technical means at normal dimensions. The regulator ensures high accuracy of signal conversion and permits the best possible regulation process to be chosen. There are 8 figures, 2 tables and 3 Soviet references.

ASSOCIATION: Kafedra teplovogo kontrolya i avtomatiki Moskovskogo energeticheskogo instituta (Chair of Heat Control and Automation of the Moscow Power Engineering Institute)

SUBMITTED: March 28, 1958

Card 2/2

ZEL'KIN, E. G. (Moskva)

Construction of extrapolators. Avtom. i telem. 23 no.9:1260-1267 S '62. (MIRA 15:10)

(Automatic control—Equipment and supplies)

ZEL'KIN, E.G.

Electric signaling device for control of rotation. Prom. energ. 15 no.2:23-24 F '60. (MIRA 13:5)

1. Moskovskiy energeticheskiy institut.
(Automatic control)

ZIL'KIN, Eduard Germanovich, aspirant.

Optimum filter and regulator with a given transient pulse function. Nauch. dokl. vys. shkoly; elektromekh. i avtom no.2:94-105 '58. (MIRA 12:1)

1. Kafedra teplovogo kontrolya i avtomatiki Moskovskogo energeticheskogo instituta.

(Electric controllers)

ZEL'KIN, G., inzh.

Train of the future is a train without wheels. Tekh.mol. 29 no.2:17 '61. (MIRA 14:3)
(Railroad research)

21315
S/029/61/000/002/003/005
B117/B205

12.1200 2311 also 2807,2607

AUTHOR: Zel'kin, G., Engineer

TITLE: Train without wheels

PERIODICAL: Tekhnika molodezhi, no. 2, 1961, 17

TEXT: This article deals with the idea of a vehicle without wheels. Engineers in many countries have been working since several months on the construction of an automobile without wheels instead of which so-called air cushions are used. Since the total weight of the vehicle is carried by the air cushion, a large amount of energy is required for the inflation of the air cushion. The suggestion is now made to develop a streamlined jet train running on rails. The weight of the vehicle is balanced by the aerodynamic lifting force produced by the high speed of the train. The air cushion is used only for lubrication. Like all modern trains, also this train will run on tracks. The wheels, however, will be replaced by a sliding chassis. This mechanism is based on the following principle: Compressed air is pumped between the rail head and the support of the undercarriage. Thus, a thin layer of air is formed

Card 1/3

Train without wheels

between the two parts. Frictional losses will be reduced to a minimum, and the train will reach a speed of up to 800 km/hr. At such a speed, the body of the train acts like the wings of a plane, and a force equal to the difference between the lifting force and the weight of the train will act on the tracks. The excess lifting force will press the train onto the lower edge of the rail head. Therefore, the compressed air must be introduced into the interspace between the lower edge of the rail head and the supporting surface of the gliding chassis. The excess amount of lifting force diminishes the interspace, increases the pressure in the air layer, and stabilizes the operation of the gliding chassis. As soon as the lifting force stops acting, the train is lowered and supported by the dampers, and the rails are relieved. Thus, the speed is not reduced, and the tracks are less subject to wear. The required lifting force is produced by jet and rocket engines which are installed in grooved channels and held by supports. Here, the principle of the Bernoulli pressure equation is realized. Various types of ram jets or combinations thereof may be used as engines. The number, performance, and combination of these engines depends on the weight, design, and speed of the train. Small wings are used to produce additional lifting forces during drive.

21315

S/029/61/000/002/003/005
B117/B205

Train without wheels

The control of the train can be automatized. A total view of the train suggested is shown on the fourth page of the insert. Reference is made to the article "Soprotivleniye vozdukha i skoryy poyezd" (Air resistance and express train) published by K. E. Tsiolkovskiy in 1927. There is 1 figure.

Legend to Fig. on fourth page of insert: 1) Lifting force; 2) air cushion; 3) excess amount of lifting force; a) and b) the winged dream of Tsiolkovskiy; 4) weight of the train.

Note: Due to the size of the figure, we were unable to fit it to a master.)

Card 3/3

88906

S/026/60/000/011/003/009
A166/A026

26.1430

AUTHOR: Zel'kin, G.G. (Moscow)

TITLE: The Photon Rocket

PERIODICAL: Priroda, 1960, No. 11, pp. 69 - 72

TEXT: The author speculates on the problems and design of a manned photon rocket traveling near the speed of light and capable of reaching the nearest star. The conversion factor for fuel into energy is compared for: chemical, plasma, ion, nuclear (fission and synthesis) and photon rocket engines to show that only the photon rocket could approach ideal conversion and the speed of light. Assuming an ideal photon rocket of 50 tons (without fuel) to operate for 1 year with constant acceleration up to a final velocity of 0.886 the speed of light, the initial mass of the rocket would have to be 200 tons. The conversion of 150 tons of fuel in 1 year would liberate $3.76 \cdot 10^{15}$ kwh of power (total world electric power production in 1957 $3 \cdot 10^{12}$ kwh. A final velocity greater than 0.886 would entail catastrophic increase in the rocket's initial mass. A photon rocket would probably take the form shown in Figure 4 and would measure several kilometers in length. It could only be launched from outside the earth. Due to the enormous energies involved, the rocket motor would have to work with

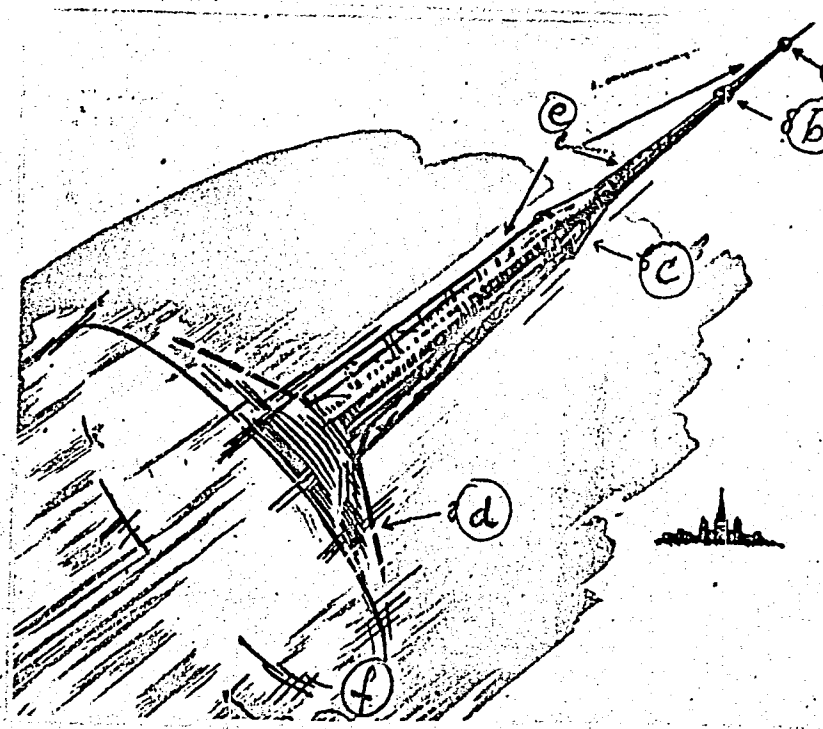
Card 1/3

The Photon Rocket

minimum heat losses and could safely absorb not more than 1/10,000,000 the total energy. Direct transition of fuel into energy by the annihilation of particles and antiparticles would, therefore, be needed. The reflector would have to collect radiant energy and channel it in a direction opposed to the direction of flight. Here the efficiency factor of the collimator would have to be in the order of $1 - 10^{-7}$ to prevent the absorbed energy from disintegrating the rocket. For protection, the rocket could probably have a gas mirror several kilometers in diameter to reflect radiant energy. Research into photon rockets would entail studies of: the relativity mechanics of such rockets; annihilation processes; the conversion of mass into radiant energy. A high intensity of radiation could probably be achieved best with very hot plasma in the region of 150,000°K, involving a device which would need excellent heat insulation but super-good radiation permeability. This might be solved by the use of magnetic fields. There are 4 figures, 1 table and 4 references: 2 German and 2 English.

88906

S/026/60/000/011/003/009
A166/A026



The Photon Rocket

Figure 4: Diagram of photon rocket. a - crew's cabin; b - instrument section; c - power units; d - reflector; e - channeled radiation; f - radiation screening.

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ZEL'KIN, G.G.

Determination of the hydraulic-resistance coefficients on the basis of transients. Nauch.dokl.vys.shkoly; energ. no.4:37-46 '58. (MIRA 12:5)

1. Rekomendovana kafedroy VIAA im. Dzerzhinskogo.
(Hydraulics)

ZEL'KIN, G.G. (Moskva)

Photon rocket. Priroda 49 no.11:69-72 N '60. (MIRA 13:11)
(Rockets (Aeronautics))

ZELKIN, I., red.; MATVEYEVA, A., tekhn. red.

[Press forging equipment]Kuznechno-pressovoe oborudovanie. Izd. ofitsial'noe. Moskva, Standartgiz, 1961. 245 p. (MIRA 15:10)

(Power presses—Standards)
(Forging machinery—Standards)

25(2) PHASE I BOOK EXPLOITATION SOV/2618

USSR. Komitet standartov, mer i izmeritel'nykh priborov

Vinty (Screws) Official ed. Moscow, 1959. 87 p. (Series: SSSR. Gosudarstvennyye standarty) 40,000 copies printed.

Ed.: I. I. Zelkin; Tech. Ed.: A. Ye. Matveyeva.

PURPOSE: This book is an official reference book of GOST standard specifications for screws.

COVERAGE: The book contains descriptions, drawings, and specification tables for round-head screws, flat-head screws, fillister-head screws and other screws minutely defined and tabulated. Reproduction of the standards is forbidden and punishable by law. All standards are dated and accompanied by the name of the originating plant and the approving agency. No personalities are mentioned. There are no references.

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Screws

Screws SOV/2618

AVAILABLE: Library of Congress (TJ 1340. V5)

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GO/fal
12-9-59

ZELKIN, I.I., red.; MATVEYEVA, A.Ye., tekhn.red.

[Screws] Vinty. Izd.ofitsial'noe. Moskva, 1959. 88 p.
(MIRA 12:5)

1. Russia (1923- U.S.S.R.) Komitet standartov, mer i izmeritel'nykh priborov.
(Screws--Standards)

PA 193T31

ZELKIN, YE. G.

USSR/Electronics - Horns Oct 51

"Waves in a Pyramidal Horn," Ye. G. Zelkin

"Zhur Tekh Fiz" Vol XXI, No 10, pp 1228-1239

Ye. N. Mayzels 1st attempted to simplify problem by approximating pyramidal horn to a biconic one, using polar coordinates coinciding with horn walls. Zelkin analyzes this problem with more detail. He considers pyramidal horn the best transformer of wave in rectangular guide into spatial wave. Submitted first 1 Oct 48, later 1 Jan 51.

193T31

3/

AM4037195 BOOK EXPLOITATION

Zelkin, YEfim Grigor'yevich

Construction of a radiation system according to a set radiation pattern (Postroyeniye izluchayushchey sistemy* po zadannoy diagramme napravlennosti), Moscow, Gosenergoizdat, 1963, 271 p. illus., biblio. 6,500 copies printed.

TOPIC TAGS: directional radiation system, electronics, radio engineering, radar, antenna

PURPOSE AND COVERAGE: This book gives the theory and various methods of calculating radiation systems with a set radiation pattern. The book is intended for engineers engaged in the development of special antennas.

TABLE OF CONTENTS [abridged]:

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AM4037195

SUB CODE: EC SUBMITTED: 20Nov63 NR REF SOV: 053

OTHER: 051 DATE ACQ: 16Apr64

Card 2/2

ZELKIN, Yefim Grigor'yevich; BENENSON, L.S., kand. tekhn.nauk, retsenzent; KORBANSKIY, I.N., red.; FRIDKIN, L.M., tekhn. red.

[Construction of a radiating system with given radiation pattern] Postroenie izluchaiushchei sistemy po zadannoi diagramme napravlennosti. Moskva, Gosenergoizdat, 1963. 271 p. (MIRA 17:1)

S/109/63/008/001/006/025
D266/D308

AUTHOR: Zelkin, Ye. G.

TITLE: Phase distribution of a radiation pattern and the antenna synthesis problem

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 1, 1963, 42-52

TEXT: The purpose is to present a general method for the synthesis of the radiation of a linear antenna. The author writes the Fourier transform pairs between the radiation pattern and the distribution function and expands the latter in a Fourier series. The problem is to find the coefficients of this expansion if the radiation pattern is given. The necessary and sufficient conditions of realizability of a radiation pattern are found on the basis of A. I. Akhiyezer's work (Lektsii po teorii approksimatsii (Lectures on Approximation Theory, GTI, 1947)). It is shown that the radiation pattern must be an integral function of the exponential type and must be quadratically integrable over the real axis, i.e. it must belong to the W_σ class of functions. Since the usually required

$$e = \begin{Bmatrix} e_{xx} & e_{xy} & 0 \\ e_{yx} & e_{yy} & 0 \\ 0 & 0 & e_{zz} \end{Bmatrix}$$

VB

the elements of e are chosen in such a way as to simplify the expression, namely the coefficient of the mixed derivatives of A should vanish and the second derivatives in respect to x and y should be identical. This leads to 3 simultaneous partial differential equations which cannot be solved in the general case. Introducing polar coordinates and assuming axial symmetry the problem can be further simplified leading to two relatively simple partial differential equations and to the equation

Phase distribution of ...

worked out. A sufficiently good approximation is obtained by taking only the first five terms in the Fourier series. Five distinctly different distribution functions are obtained from which the best can be selected. There are 4 figures.

SUBMITTED: February 8, 1962

Card 3/3

ZELKIN, Ye.G.

Synthesis of an antenna with plane aperture. Radiotekh. i elektron. 8 no.12:1980-1987 D '63. (MIRA 16:12)

ACCESSION NR: AP4009970 S/0109/64/009/001/0024/0032

AUTHOR: Zelkin, Ye. G.

TITLE: Synthesis of a linear radiator of an arbitrary shape

SOURCE: Radiotekhnika i elektronika, v. 9, no. 1, 1964, 24-32

TOPIC TAGS: antenna, antenna radiator, antenna linear radiator, antenna radiation pattern, arbitrary shape antenna radiator, antenna radiator synthesis

ABSTRACT: Synthesizing a plane-curve-shaped linear radiator is theoretically considered. With the radiator shaped after a $y = l_0(x)$ line lying in the $z = 0$ plane, these integrals:

$$N_x = \int_{-l/2}^{l/2} F_x^0(x)\, e^{ik\sin\theta(x\cos\psi + L(x)\sin\psi)}\, dx,$$

$$N_y = \int_{-l/2}^{l/2} F_y^0(x)\, e^{ik\sin\theta(x\cos\psi + L(x)\sin\psi)}\, dx,$$

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ACCESSION NR: AP4009970

where $F_x^0(x) = F_x(x)\sqrt{1 + L'^2(x)}$;

$F_y^0(x) = F_y(x)\sqrt{1 + L'^2(x)}$,

enter the fundamental equation of the radiation pattern of a plane aperture:

$$\vec{E}(\theta, \psi) = (1 + \cos\theta)(N_x\vec{q}_1 + N_y\vec{q}_2).$$

By solving the above equations, the conditions which should be met in order to have the specified radiation pattern accurately reproduced by the radiator are determined. "The author is thankful to Ya. N. Fel'd for his valuable hints and interest in the work." Orig. art. has: 28 formulas.

ASSOCIATION: none

SUBMITTED: 31Oct62 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: CO NO REF SOV: 002 OTHER: 001

Card 2/2

ZELKINA, E.

Studies on the agrarian problem in Central Asia. Moskva, Izd-vo Kommunisticheskoi akademii, 1930. 127 p.

ZELKIN, T. I.

SESSION B—5—7 : Response of Brain and Nerve

(a)

Cytochemical Analysis of Cells of the Central Nervous System in the Latent Period of Radiation Damage

B

A. L. Shabadash, T. I. Zelkina and N. D. Agrachova

The cytochemical investigation of ribonucleoprotein (by the method of Shabadash) showed that even during the first minute following the total-body irradiation of white male mice (LD_{50}) there were considerable shifts in the isoelectric point (IEP) of the mitochondria of the afferent neurons and brain cortex cells. The alkaline shift of IEP increases also during the subsequent 20 min (by 1.0 to 1.4 pH units) and is maintained for several days. The curve of the quantitative indices of deviation from the mean standard is wavy; during the first hours one notes several peaks; at 24 hr a plateau, which passes gradually into the standard level at 48 hr; there follows another rise, with a maximum during the 4th day, while during the period of clinical manifestations one observes a complex alteration of IEP deviations in the alkaline and acid directions. It is known that the electro-colloidal changes of ribonucleoproteins substantially alter the reaction between the mitochondrial enzymes and their substrates; this, in turn, distorts the metabolism and the functioning of the most important neuron categories; cytochemical shifts are more marked than visible disturbances in the microstructure of organelles. The screening of the head or trunk shows that the observed physico-chemical changes are the sum of direct radiation effects on the central nervous system and of the distance (including the reflex) processes. The 'latent period' of radiation damage of mammals virtually does not exist since the cytochemical 'pathology' of the neuron mitochondria is revealed permanently and predetermines the disturbance of normal correlations of the entire body. When radiation illness is in full swing, distinct damage to the neuron mitochondria in the higher trophic centres of the hypothalamus can be seen.

Institute of Biological Physics of the Academy of Sciences of the USSR, Moscow

report presented at the 2nd Intl. Congress of Radiation Research, Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001964410009-7"

GAPOCHKO, K.G.; ALIYEV, A.M.; ZELKIND, D.B., kand.med.nauk; STATSENKO, A.A.; ESTER, E.; BELEDA, R.V.; AZNAUR'YAN, M.S.

Abstracts. Sov.med. 26 no.7:141-144 Jl '62. (MIRA 15:11)

1. Iz kafedry infektsionnykh bolezney Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Korova (dor Gapochko). 2. Iz fakul'tetskogo terapevticheskogo otdeleniya Dagestanskoy respublikanskoy klinicheskoy bol'nitsy (for Aliyev). 3. Iz kozhnogo otdeleniya poliklinik No. 68, Moskvy (for Zelkind). 4. Iz Dokshukinskoy rayonnoy bol'nitsy Kabardino-Balkarskoy ASSR (for Statsenko). 5. Iz Myysakyul'skoy gorodskoy bol'nitsy Estonskoy SSR (for Ester).

(MEDICINE--ABSTRACTS)

ZELKIND, D. B.

Unilateral lichen planus ruber in a patient with organic disorders of the nervous system. Vest. vener., Moskva no.5:50 Sept-Oct 1951. (CIML 21:1)

1. Candidate Medical Sciences. 2. Moscow.

ZEL'KIND, Ye.M.

Petroleum refining in the Soviet Union, its growth and the basic directions of technical progress. Nefteper. i neftekhim. no.8:3-6 '64. (MIRA 17:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut tekhniko-ekonomicheskikh issledovaniy po neftyanoy, neftekhimicheskoy i gazovoy promyshlennosti.

GOLDSHTEYN, R.I.; ZEL'KIND, Ye.M.; TSEYTLIN, S.I.; CHEKULAYEVA, Yu.I.; KUROVA, E.A., ved. red.; SOLOV'YEVA, S.S., ved. red.

[Petroleum refining abroad; a statistical and economic collection] Neftepererabotka za rubezhom; statistiko-ekonomicheskii sbornik. Moskva, TsNIIITEIneftegaz, 1963. 112 p. (MIRA 17:12)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut informatsii i tekhniko-ekonomicheskikh issledovaniy po neftyanoy i gazovoy promyshlennosti.

ZEL'KIND, Yefim Markovich; BORODULINA, K.M., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Production and consumption of fuels and lubricants in capitalist countries; present status and basic tendencies] Proizvodstvo i potreblenie topliv i masel v kapitalisticheskikh stranakh; sovremennoe sostoianie i osnovnye tendentsii. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 279 p. (MIRA 12:7)
(Fuel) (Lubrication and lubricants)

ZEL'KIND, Ye.M.

Means for increasing the capacity of petroleum refineries.
Khim. i tekh. topl. i masel 8 no.9:1-6 S '63.
(MIRA 16:11)

BERG, P.D.; GOL'DSHTEYN, R.I.; ZEL'KIND, Ye.M.; TOMASHPOL'SKIY, L.M.; FEDOROV, I.V.; IVANOV, V.A.; CHEKULAYEVA, Yu.I.; KUROVA, E.A., red.; NIKOLAYEVA, Ye.A., ved. red.; MASOLOV, Ya.M., tekhn. red.

[Petroleum refining in capitalist countries; statistical studies] Neftepererabatyvaiushchaia promyshlennost' kapitalisticheskikh stran; statisticheskii sbornik. Moskva, Vol.1. [Petroleum refining and petroleum products] Pererabotka nefti i proizvodstvo nefteproduktov. 1960. 219 p. Vol.2. [Consumption, transportation, and storage of petroleum and petroleum products] Potreblenie, transport i khranenie nefti i nefteproduktov. 1961. 323 p. (MIRA 15:6)

1. Moscow. Gosudarstvennyy nauchno-issledovatel'skiy institut nauchnoy i tekhnicheskoy informatsii.
(Petroleum--Refining) (Petroleum industry--Statistics)